ABSTRACT

A ventricular assistive device (VAD) based on a progressive cavity pump includes a pump housing having an inlet and an outlet, a pump stator contained within the pump housing, a pump rotor rotatably disposed within the pump stator, a motor including a motor rotor contained within the pump housing and a direct drive means connected between the motor rotor and an axial shaft of the pump rotor for rotating the pump rotor. The motor rotates the motor rotor, which in turn rotates the pump rotor through the direct drive means. The rotation of the pump rotor within the pump stator forms a plurality of cavities that carry blood forward through the pump housing from the inlet to the outlet as the motor drives the direct drive means.